

## IN THE CLAIMS

Please Amend Claim 1 As Follows.

1        1.    (**Currently Amended**) In a timing trace stream  
2 having a logic signal associated with each clock cycle, the  
3 timing trace stream being transmitted in ~~packets~~ packet  
4 groups having a plurality of packets, a method of  
5 compressing the timing trace stream, the method comprising:

6        when each of a preselected number of clock cycles have  
7 at least one logic "1" signal and at least one logic "0"  
8 signal associated with each clock cycle, transmitting a  
9 standard group of packets having a logic signal associated  
10 with each of the preselected number of clock cycles; ~~and~~

11        when the preselected number of clock cycles has only  
12 one of the logic "1" and the logic "0" signals associated  
13 with each clock cycle, transmitting a compressed group of  
14 packets, the packets including an indicia of the one logic  
15 signal, the packets including a signal group representing  
16 the preselected number;

17        wherein each group of packets has at least one header  
18 packet and at least one information packet; and

19        wherein the standard group of packets includes a  
20 plurality of information packets and the compressed group  
21 of packets includes one information packet.

Please Cancel Claim 2.

2.     **(Currently Cancelled)**     ~~The method as recited in claim 1 wherein each group of packets has at least one header packet and at least one information packet.~~

Please Cancel Claim 3.

3.     **(Currently Cancelled)**     ~~The method as recited in claim 2 wherein the standard group of packets includes a plurality of information packets and the compressed group of packets includes one information packet.~~

Please Amend Claim 4 As Follows.

4.     **(Currently Amended)** The method as recited in claim 1 further comprising:

representing an activity of ~~the~~ a program counter with a first logic signal during a clock cycle; and

representing a non-activity of the program counter with a second logic signal during ~~an associated~~ a clock cycle.

Please Amend Claim 5 As Follows.

5.     **(Currently Amended)** An apparatus for generating a timing trace stream in a target processor, a logic signal being associated with each target processor clock cycle, the apparatus comprising;

1 a logic unit responsive to a preselected number of  
2 logic signals, the logic unit providing a first control  
3 signal when all the preselected logic signals are  
4 different, the logic signal providing a second control  
5 signal when all the preselected logic signals are the same;

6 a first storage unit responsive to the preselected  
7 logic signals for storing the each logic signal in a  
8 predetermined storage location, the first storage unit  
9 responsive to the first control signal for transferring the  
10 contents of then first storage unit; and

11 A second storage unit responsive to the preselected  
12 logic signals for storing the current logic signal in a  
13 pre-established storage unit location, the second storage  
14 unit storing a signal group representing a multiple of the  
15 preselected number, the second storage unit responsive to  
16 the second logic signal for transferring the contents of  
17 the second storage unit; and

18 wherein the storage location in the first and the  
19 second storage units are arranged in groups of packets,  
20 each group of packets including control signals with the  
21 packet payload.

22  
23 Please Cancel Claim 6.

24  
25 6. **(Currently Cancelled)** ~~The apparatus as recited~~  
26 ~~in claim 5 wherein the storage location in the first and~~  
27 ~~the second storage units are arranged in groups of packets,~~  
28 ~~each group of packets including control signals with the~~  
29 ~~packet payload.~~

1 Please Amend Claim 7 As Follows.

2  
3 7. (**Currently Amended**) The apparatus as recited in  
4 claim 5 wherein each of the preselected number of logic  
5 signals represents an activity of ~~the~~ a program counter  
6 during an associated clock cycle.

7  
8 8. (**As Filed**) The apparatus as recited in claim  
9 5 further comprising a first in/first out storage unit, the  
10 contents of the first and the second storage unit being  
11 transferred to the first in/first out storage unit.

12  
13 Please Amend Claim 9 As Follows.

14  
15 9. (**Currently Amended**) A system for transferring  
16 data concerning the operation of target processor to a host  
17 processing unit, the system comprising:

18 a program counter trace stream generation unit, the  
19 program counter trace stream generation unit generating a  
20 trace stream identifying each activity of the program  
21 counter; and

22 a timing trace stream generation unit, the timing  
23 trace stream generation unit having a first mode of  
24 operation generating a timing trace header packet and a  
25 first information packet stream with a logical signal  
26 associated each clock cycle, ~~the~~ a first logical signal  
27 identifying when the program counter performed an activity  
28 during the associated clock cycle and a second logic signal  
29 identifying when the program counter was non-active during  
30 an associated clock cycle, the timing trace stream

1 generation unit having a second mode of operation  
2 generating a header packet and a second timing trace  
3 information packet, the second timing trace information  
4 packet replacing at least one first information packet when  
5 all of the logic signals in the at least one first  
6 information packet including one type of signal group  
7 relating a are the same logic signal with each of a  
8 predetermined number of clock cycles, the timing trace  
9 stream including a second type of signal groups identifying  
10 the predetermined number of clock cycles having the same  
11 logic signal the timing trace generation unit including a  
12 logic unit, the logic unit generating control signals  
13 determining whether the first information packet stream or  
14 the second information packet is transferred to the host  
15 processing unit.

16  
17 Please cancel Claim 10.

18  
19 10. **(Currently Cancelled)** ~~The system as recited in~~  
20 ~~claim 9 wherein the trace streams include header packets~~  
21 ~~and information packets.~~